

National Physical Science Consortium (NPSC)

Program Description

The NPSC is an organization of leading universities, corporations, and national laboratories that provides scholarly and career paths for US citizens, with special emphasis on underrepresented minorities and women in the physical sciences and related engineering fields. The consortium is self-supporting, funded by annual membership fees received from employer members. Current membership includes 111 Ph.D.-granting colleges and universities; 39 sponsoring employers, including Los Alamos National Laboratory; and alliances with the Navajo Nation and the Hispanic Association of Colleges and Universities (HACU). The Laboratory became an employer member in 1989.

The National Physical Science Consortium is a full-time study, Ph.D.-track program. A grade point average of 3.0/4.0 is required for participation in the program. The fellowship requires a student be enrolled in the following fields of study: astronomy, chemistry, computer science, geology, materials science, mathematical sciences, physics, and subdisciplines. Included are specific engineering fields: chemical, computer, electrical, environmental, and mechanical. The fellowship is normally continual as long as the fellow is making satisfactory academic progress and attending full-time, maintains employment eligibility for their sponsoring employer, and maintains satisfactory on-the-job performance at the sponsoring employer's worksite.

The consortium granted its first fellowship awards in 1989 with seven fellows (Table 22). The program is in its 11th year and has had 62 Ph.D. graduates from a total of 258 fellows in the program. The internal breakdown is 51%

minority and 49% nonminorities—of which 74% of all fellows are female.

In summary, the National Physical Science Consortium is a unique partnership of industry, national laboratories, and higher education joined together to create a continuous source of US citizen research scientists offering employers and universities the opportunity to add diversity and balance in the workplace. In turn, the program provides opportunities to young, bright future scientists to achieve their academic goals and research aspirations.

Performance Objective and Milestones

By partnering with the National Physical Science Consortium, the Laboratory plans to increase the existing pool of Ph.D.s in the physical sciences with special emphasis on diversity, while

Table 22. NPSC Demographics

Participant Demographics			
Ethnicity	Male	Female	Total
Anglo	0	1	1
African American	0	1	1
Hispanic	1	1	2
Total	1	3	4

supporting the Laboratory's mission. To help achieve this important mission, student research assignments through the National Physical Science Consortium focus on the Laboratory's critical skills areas.

Highlights of this Year's Accomplishments

Through leveraging of resources, including cost sharing with sponsoring technical divisions and Lawrence Livermore National Laboratory (one student), the Laboratory was able to support four students through the National Physical Science Consortium during FY01. These students were awarded fellowships in FY99 and met the requirements for continuing in the program during FY01. All four students will continue the program in FY02 if they meet program eligibility requirements.

Schools Represented

Cornell University
Indiana University
Stanford University
University of Washington

Participant Profile

One of this year's NPSC fellows, Shannon McDaniel, a Graduate Research Assistant (GRA)

at the LANSCE-12 Neutron Scattering Center, received the honor of attending the 51st annual Lindau Meeting held in Germany in June 2001. The meeting brought together 17 Nobel Prize laureates and over 500 graduate students from around the world. This was the second year that United States students were invited to participate. The DOE sponsors American graduate student attendance at the meeting, and each DOE Lab can nominate one graduate representative. Shannon was the Los Alamos National Laboratory GRA nominated to attend this year's meeting. Currently a Ph.D. candidate in geophysics at the University of Washington, Shannon is at LANSCE working full time on the texture analysis of a fossilized sand dollar. Her actual degree work will focus on the rheology or flow patterns of ice under conditions on Earth and on other planets. Her NPSC fellowship is a DOE cosponsored collaboration between Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory. As Shannon explains, "The fellowship supports my tuition and stipend through six years of grad school. It is designed to bring together graduate students and national labs and establish important connections between the laboratories and academia. In return for my cosponsorship through the national labs, I have worked for two summers, one in each lab location. Now, I am here at LANL on a permanent basis to complete my Ph.D."